

mal rainfall. In general the precipitation was greatest in the northern part of the district, and least in the southern, but the distribution over limited areas was characteristic of that in the summer season, large differences occurring among stations comparatively near to one another. In each of the State areas, except the small South Dakota, Indiana, and Missouri sections, amounts exceeding 5 inches and less than an inch were recorded, save in North Dakota, where the least amount was 1.08 inches. The greatest amount reported was 9 inches, at Worthington, in southwestern Minnesota, 8 inches of this having fallen in 11 hours. The least amount reported was 0.23 inch, at East St. Louis, Ill.

Over the northern half of the district the precipitation was quite timely; in Iowa and Missouri but little occurred in the first and last decades; while in Illinois the distribution in point of time was similar to that in Iowa and Missouri, in the southern part, but was more favorable in the northern part of the State. Sixteen instances of excessive precipitation at the rate of 2.50 inches or more in 24 hours were reported, most of these rains occurring on the 10th-11th and 17th-18th. The average number of rainy days for the district as a whole was 7.

RIVERS.

The larger streams of the district fell steadily all month, but in the Mississippi River the stages were sufficient for navigation, and mills and power plants suffered no shortage of water.

MISCELLANEOUS.

Northwesterly winds prevailed over the Dakotas, and over the remainder of the district they were from some southerly point, southeasterly being reported the greatest number of times. The highest velocity recorded was 48 miles an hour from the north, at St. Paul, Minn., on the 21st. The amount of sunshine was more than the normal over much of the district. The average number of clear days was 15; partly cloudy, 10; cloudy, 6.

SEVERE STORM AT DUBUQUE, IOWA.

By JAMES H. SPENCER, Local Forecaster.

A severe thunderstorm occurred during the afternoon and night of August 17. It was the severest storm at this station in a year. There appeared to be two storms, the first beginning at 3.50 p. m., and the second at 6.36 p. m. The first storm moved slowly over the station from the southeast, an unusual direction at this station. The second came from the northwest. From 7.30 p. m. to 8.15 p. m. 1.40 inches of rain fell; the total amount for the entire storm was 2.28 inches. The thunder during these storms was loud and the lightning vivid and blinding. Peter J. Meyer, a farmer living at Holy Cross, was killed by lightning. In Dubuque County one residence and at least seven barns, with their contents, were destroyed by fire resulting from lightning. Several horses were killed, as well as a number of other stock. The greatest damage was in the northern half of the county. Several small bridges were either swept away or damaged by freshets resulting from the heavy rain. In a few districts corn was beaten down, but the beneficial effects of the rain far exceeded the damage wrought. In Dubuque the steeple of the Westminster Presbyterian Church was struck by lightning, and damaged to a considerable extent; and the Iowa Telephone Co. suffered heavily, more than 1,000 telephones having been put out of commission. It is estimated that the total damage from the storm in Dubuque County was at least \$25,000.

ERRATA.

Report for July, 1913: Sandy Lake, Minn., monthly mean temperature, published 62.3, should be 64.3, and departure from the normal, published -4.6, should be -2.6. Charles City, Iowa, total precipitation, published 2.81, should be 2.82, and departure from the normal, published -0.77, should be -0.76. Perry, Iowa, monthly mean temperature, published 78.5, should be 77.5, and departure from the normal, published +3.9, should be +2.9. Wausau, Wis., lowest temperature, published 42, should be 43.